



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) Publication number:

0 410 808 A3

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 90308300.4

(51) Int. Cl.⁵: **A01D 17/06, B07B 1/15**

(22) Date of filing: 27.07.90

(30) Priority: 28.07.89 GB 8917291
28.07.89 GB 8917292
28.07.89 GB 8917293

(43) Date of publication of application:
30.01.91 Bulletin 91/05

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

(88) Date of deferred publication of the search report:
31.07.91 Bulletin 91/31

(71) Applicant: **RICHARD PEARSON LIMITED**
Priory Road, Freiston
Boston, Lincolnshire PE22 0JZ(GB)

(72) Inventor: **Needham, Timothy, c/o Richard Pearson Limited**
Priory Road, Freiston
Boston, Lincolnshire PE 22 0JZ(GB)
Inventor: **Weston, David, c/o Richard Pearson Limited**
Priory Road, Freiston
Boston, Lincolnshire PE 22 0JZ(GB)
Inventor: **Grimme, Franz, Jr.**
Thomasstrasse 4
W-2845 Damme(DE)

(74) Representative: **Devons, David Jon et al**
MARKS & CLERK 57-60 Lincoln's Inn Fields
London WC2A 3LS(GB)

(54) **A lifting conveyor, and an agricultural separator incorporating a lifting conveyor.**

(57) A lifting conveyor for an agricultural separator, comprises at least one rotatable member (4-6) having a plurality of axially-spaced starwheels (19) each having a plurality of angularly-spaced flexible fingers (25). Means (1') for feeding material to the rotatable member (4), and means (3) for receiving material from the rotatable member (4) are provided so that the feeding means (1'), the rotatable member (4)

and the receiving means (3) provide an inclined conveyor surface extending upwardly from the feeding means (1') to the receiving means (3). Means for rotating the rotatable member (4) to lift material thereon are also provided. The replacement of the normal lifting web by a starwheel lifting portion (2) requires less power, provides less wear and makes for a shorter lifting conveyor.

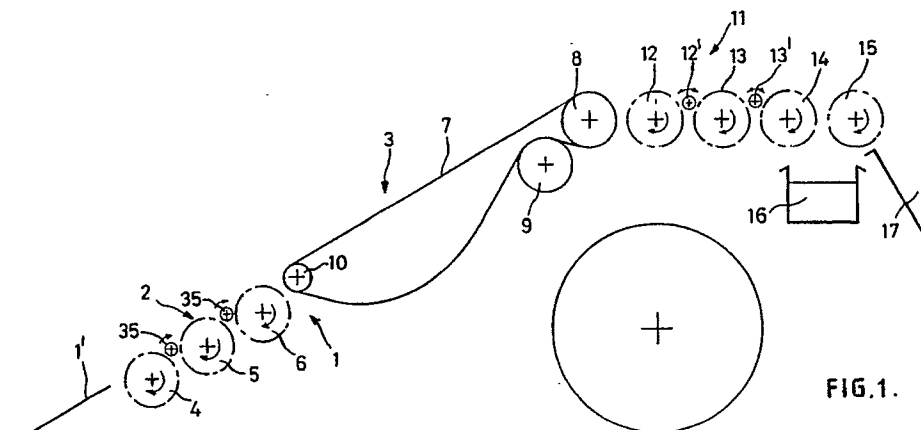


FIG. 1.

EP 0 410 808 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number

EP 90 30 8300

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
P,X	GB-A-2 222 507 (R. PEARSON LTD) * Entire document *	1-20	A 01 D 17/06 B 07 B 1/15
X	GB-A- 878 492 (J. MASSON REEKIE) * Column 1, line 24 - column 4, line 76; figures 1,2,4,5 *	1,9,10-11,16	
X	FR-A-2 318 572 (W. STOLL) * Page 5, line 6 - page 7, line 25; figures 1,5,7 *	1-3,6,16	
D,X	GB-A-2 145 612 (R. PEARSON LTD) * Entire document *	3-4,6-8,12-13,18	
D,Y	* Figure 2 *	2	
X	US-A-2 670 846 (W. RIENKS et al.) * Column 1, line 34 - column 5, line 12; figures 1,2 *	5,9,13,16,19	
Y	* Figures 1,2 *	2	
Y	US-A-2 867 322 (WEISENFELD) * Column 1, line 54 - column 4, line 6 *	10	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
A		9,11,14,15	A 01 D B 07 B
P,Y	GB-A-2 219 949 (JAUNCEY) * Page 5, paragraph 4; figures 11,12 *	10	
A		11,16	
	--- -/-		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 09-04-1991	Examiner VERMANDER R.H.
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			



European Patent
Office

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

X

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-8: A lifting conveyor separating stone and clod.
2. Claims 9-20: A horizontal separator to separate large objects.

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	GB-A- 878 492 (REEKIE) * Page 1, line 47 - page 2, line 19; figures 1,2,4,5 * ---	9,10,11 ,12	
A	EP-A-0 101 637 (ZYLSTRA & BOLHUIS) * Page 2, line 12 - page 4, line 14; figures 2,3 * ---	10,11, 14,15, 18	
A	FR-A-1 048 299 (CARLIER) * Complete document * -----	9,12,13	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 09-04-1991	Examiner VERMANDER R.H.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			